

REMARKS

Claims 164-311 are currently pending in the application. Claims 164-168, 184, 187, 197-215, 219-227, 241, 249-258, 264-267, 276-290, 296-301, 305, 306, 310, and 311 have been cancelled without prejudice. The Applicants will be pursuing the subject matter of these claims in another application. Claims 169, 175-177, 185, 186, 188, 195, 216, 228, 233, 242, 246, 261, 268, 274, 275, 293, 302-304 and 307 have been amended. Claims 169, 175-177, 185, 186, 188, 216, 228, 233, 242, 246, 268, 274, 275, 302, 304, and 307 have been amended to their independent form, including any intervening dependencies. Accordingly, the scope of claims 169, 175-177, 185, 186, 188, 216, 228, 233, 242, 246, 268, 274, 275, 302, 304, and 307 remains unchanged and, thus, have not been narrowed. Claims 195 and 303 have been amended by modifying the claim from which they are dependent. Claims 261 and 293 have been amended to further clarify that the denominations are being determined, as specifically set forth in their respective independent claims, independent of the bill size. Thus, no new matter has been entered. The Applicants respectfully request that the amendments be entered.

Thus, claims 169-183, 185, 186, 188-196, 216-218, 228-240, 242-248, 259-263, 268-275, 291-295, 302-304, and 307-309 will be pending in the application upon entry of the amendment. Reconsideration of the claims in view of the following remarks is respectfully requested.

I. Information Disclosure Statement (IDS)

In the Office Action at pages 2-3, the Examiner identified four references of which a copy of the reference could not be found. The Applicants are submitting herewith an IDS that includes these four references, as well as additional references. These four references may be found at C-C13; C-D95; C-D101 and C-D96, C-D97 and C-D98 in the Cummins-Allison Library located at the Patent and Trademark Office at PK5-5T11. The Applicants have included a copy of the remaining references. If the Examiner cannot locate any of the references in the Cummins-Allison Library, the Examiner is invited to contact the undersigned to obtain a copy. The Applicants respectfully request that the Examiner review these references and make them of record.

35 U.S.C. § 103(a) Rejections

The Applicants will discuss these rejections in terms of the claims that will be pending after entry of the amendments discussed above.

Independent Claims 169, 175-177, 185, 186 and 188

Independent claims 169, 175-177, 185, 186 and 188 recite, *inter alia*, “wherein the halting is performed such that the flagged bill is positioned as the last bill in one of the output receptacles.” Japanese Patent Publication 54-71673 to Hatanaka et al. (“JP 71673”) does not teach or suggest halting being performed such that a flagged bill is positioned as the last bill in one of the output receptacles.

Rather, Applicants believe that JP 71673 discloses a currency discriminator having two destinations for document processing. For example, JP 71673 discloses the following:

Notes of paper currency are extracted one by one from the loading unit and conveyed along the paper currency collection platform 23. If a mismatch is indicated by the collation signals RF from the denomination collation unit 114, the conveyor drive unit 120 is stopped. When a stop signal is inputted using the stop button 109, the conveyor drive unit 120 is stopped even when the conveyor is still in operation.

The control circuit also has a wrong denomination paper currency discharge unit 123. If a mismatch is indicated by the collation signals RF from the denomination collation unit 114, the detected note of paper currency is not conveyed to the paper currency collection unit 23 but may be discharged from a discharge slot.

Page 7, lines 19 – page 8, line 1. Accordingly, the wrong denomination paper currency discharge unit 123 is capable of routing bills to a discharge slot instead of the paper currency collection unit 23.

JP 71673, however, is silent on any further details regarding the bills being routed to the discharge slot, let alone halting being performed such that the flagged bill is positioned as the last bill in one of the output receptacles.

Therefore, independent claims 169, 175-177, 185, 186 and 188 are not obvious in view of JP 71673 and should be in a condition for allowance. Claims 170-174, 178-183, and 189-196, which depend on either 169, 177 or 188 are not obvious in view of JP 71673 for at least the same reasons and should be allowable.

Independent Claim 216

Independent claim 216 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute”, “determining whether a bill is a suspect bill, wherein one of the certain criteria is a bill being a suspect bill and wherein suspect bills are flagged”, and “further directing stranger bills and no call bills to the first output receptacle and directing suspect bills to the second output receptacle.” JP 71673 does not teach or suggest such limitations.

The Office Action acknowledges that JP 71673 does not teach or suggest “counting and determining the denomination of the bills including United States bills of a plurality of denominations at a rate of at least 800 bills per minute”. See page 6 of the Office Action. In particular, JP 71673 does not disclose counting or denominating U.S. bills. Rather, JP 71673 discloses counting and denominating Japanese yen. See, e.g., page 8 of JP 71673. Additionally, JP 71673 does not disclose any type of bill being counted and denominated at a rate of at least 800 bills per minute.

A. Combination of JP 71673 and Cargill is Improper

The Office Action at page 6 states that “document processors having such processing rates [800 bills per minute] are well known in the art.” After referring to 5,430,664 to Cargill (“Cargill”), the Office Action concludes that “it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the processing rate feature of the Cargill patent into the document processor of [JP 71673] to enhance the processing efficiency of the processor.” Page 6 of the Office Action. The Applicants respectfully disagree. The Applicants also note that claim 216 requires counting and denominating at 800 bills per minute, not just transporting at such a rate.

The combination applied in the Office Action of JP 71673 with Cargill is improper for several reasons as discussed below.

First, Cargill does not disclose the acts of “counting and determining the denomination of the bills including United States bills of a plurality of denominations at a rate of at least 800 bills per minute.” Rather, Cargill discloses speeds associated with only counting bills. See, e.g., the passage cited at page 6 of the Office Action; “An integration time on the order of 2 ms has been

found to be suitable for document counting speed of about 1200 documents per minute.” (emphases added) (Col. 11, lines 62-64). This passage, however, does not disclose denominating U.S. bills at 800 bills per minute as required in claim 216. Thus, one of ordinary skill in the art would not look to Cargill and combine it with JP 71673 to provide the acts of “counting and determining the denomination of the bills including United States bills of a plurality of denominations at a rate of at least 800 bills per minute.” It is clear that the Office Action is using impermissible hindsight to combine these references. Obviousness cannot “be established using hindsight or in view of the teachings or suggestions of the invention.” *See, e.g.,* Para-Ordnance Mfg. Inc. v. SGS Importers Int’l Inc., 73 F.3d 1085, 1087, 37 U.S.P.Q.2d 1237, 1239 (Fed. Cir. 1995), *cert denied*, 519 U.S. 822 (1996)).

Additionally, assuming *arguendo*, that there is a motivation to combine JP 71673 and Cargill (which we believe is not the case), the Office Action has not provided any information on how one of ordinary skill in the art would combine these references having, for example, different transportation paths and different number of output receptacles. Cargill only appears to disclose a one output receptacle embodiment, whereas JP 71673 has two output destinations. *See, e.g.,* FIG. 1 of Cargill. Moreover, there is no teaching or suggestion that some combination of JP 71673 and Cargill would actually operate and that the acts of “counting and determining the denomination...800 bills per minute” would be performed.

B. JP 71673 Does Not Disclose Flagging Suspect Bills

Additionally, JP 71673 does not disclose flagging suspect bills, let alone “further directing stranger bills and no call bills to the first output receptacle and directing suspect bills to the second output receptacle” as recited in claim 216. The Office Action has not identified where JP 71673 discloses such limitations.

Therefore, independent claim 216 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 217 and 218, which depend directly on claim 216, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 228

Independent claim 228 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles,” and “delivering bills meeting the certain criteria of having their denomination determined to a first output receptacle and directing no call bills to a second output receptacle.” JP 71673 does not teach or suggest such limitations.

As discussed above with respect to claim 216, neither JP 71673, Cargill, nor the combination thereof, teaches or suggests “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles.”

JP 71673 also does not teach or suggest “delivering bills meeting the certain criteria of having their denomination determined to a first output receptacle and directing no call bills to a second output receptacle.” Rather, JP 71673 discloses that its conveyor drive unit 120 is stopped when a mismatch is indicated from the denomination collation unit and provides no further details on the halting of the conveyer drive unit or the location of the bill, let alone directing such bills to a second output receptacle. *See*, generally, page 8 of JP 71673.

Therefore, independent claim 228 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 229-232, which depend either directly or indirectly on claim 228, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 233

Independent claim 233 recites the acts, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles” and “determining whether bills are suspect bills and wherein the halting occurs when a bill meets a criterion of being determined to be a suspect bill.”

For the same reasons as discussed above with respect to claim 216, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such limitations.

Therefore, independent claim 233 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 234-240, which depend either directly or indirectly on claim 233, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 242

Independent claim 242 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles” and “wherein the halting occurs when a bill meets a second criterion of being determined to be a suspect bill.” For the same reasons as discussed above with respect to claim 216, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such limitations.

Therefore, independent claim 242 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 243-245, which depend either directly or indirectly on claim 242, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 246

Independent claim 246 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations, at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles.” As discussed above with respect to claim 216, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such a limitation.

Therefore, independent claim 246 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 247 and 248, which depend directly on claim 246, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 259

Independent claim 259 recites the acts of, *inter alia*, “flagging a bill that has been determined to be suspect”, and “wherein the flagging comprises halting the transport mechanism when a bill is determined to be suspect.” As discussed above with respect to claim 216, JP 71673 does not teach or suggest such limitations.

Therefore, independent claim 259 is not obvious in view of JP 71673 and should be in a condition for allowance. The Office Action has applied the combination of JP 71673 and U.S. Patent No. 4,487,306 to Nao (“Nao”) to dependent claim 261. Claims 260-263, which depend directly on claim 259, are not obvious in view of JP 71673, Nao, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 268

Independent claim 268 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations at a rate of at least 800 bills per minute, utilizing a detector positioned along a transport path between the input receptacle and the output receptacles”, and “wherein the flagging comprises halting the transporting with a flagged bill that meets or fails to meet at least a given set of the criteria positioned in one of the output receptacles, wherein the certain criteria include the denomination of a bill, a bill failing to meet a criterion of having its denomination determined being termed a no call bill.” As discussed above with respect to claims 169, 216 and 228, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such limitations.

Therefore, independent claim 268 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance. Claims 269-273, which depend either directly or indirectly on claim 268, are not obvious in view of JP 71673, Cargill, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 274

Independent claim 274 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations at a rate of

at least 800 bills per minute, utilizing a detector positioned along a transport path between the input receptacle and the output receptacles”, and “wherein the flagging comprises halting the transporting with a flagged bill that meets or fails to meet at least a given set of the criteria positioned in one of the output receptacles.” As discussed above with respect to claims 169, 216 and 228, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such limitations. Therefore, independent claim 274 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance.

Independent Claim 275

Independent claim 275 recites the acts of, *inter alia*, “counting and determining the denomination of the bills, including United States bills of a plurality of denominations at a rate of at least 800 bills per minute, utilizing a detector positioned along a transport path between the input receptacle and the output receptacles. As discussed above with respect to claim 216, neither JP 71673, Cargill, nor the combination thereof teaches or suggests such a limitation. Therefore, independent claim 275 is not obvious in view of JP 71673, Cargill, or the combination thereof and should be in a condition for allowance.

Independent Claim 291

Independent claim 291 recites the acts of, *inter alia*, “generating a suspect signal when a bill is determined to be suspect”, “generating a stopping signal in response to the suspect signal”, and “stopping a transport drive motor in response to the stopping signal.” As discussed above with respect to claim 216, JP 71673 does not teach or suggest such limitations. Therefore, independent claim 291 is not obvious in view of JP 71673. The Office Action has applied the combination of JP 71673, Nao to dependent claim 293. Claims 292-295, which depend directly on claim 291, are not obvious over JP 71673, Nao, or the combination thereof for at least the same reasons and should be allowable.

Independent Claim 302

Independent claim 302 recites the act of, *inter alia*, “wherein the halting occurs with the bill meeting the stranger bill or non call bill criterion being positioned in one of the output

receptacles.” As discussed above with respect to claim 169, JP 71673 does not teach or suggest such a limitation. Specifically, JP 71673 is silent on any further details regarding the bills being routed to the discharge slot, let alone halting being performed with a bill meeting a stranger bill or no call bill criterion being positioned in one of the output receptacles.

Therefore, independent claim 302 is not obvious in view of JP 71673 and should be in a condition for allowance. Claim 303, which depends directly on claim 302, is not obvious in view of JP 71673 thereof for at least the same reasons and should be allowable.

Independent Claim 304

Independent claim 304 recites the act of, *inter alia*, “wherein the halting occurs with the bill meeting the stranger bill or no call bill criterion being located at a predetermined position.” As discussed above with respect to claim 169, JP 71673 does not teach or suggest such a limitation. Specifically, JP 71673 is silent on any further details regarding the bills being routed to the discharge slot, let alone halting being performed with a bill meeting a stranger bill or no call bill criterion being located at a predetermined position. Therefore, independent claim 304 is not obvious in view of JP 71673 and should be in a condition for allowance.

Independent Claim 307

Independent claim 307 recites, *inter alia*, “determining whether bills are suspect and wherein one of a criterion is a bill being a suspect bill.” As discussed above with respect to claim 216, JP 71673 does not teach or suggest such a limitation. Therefore, independent claim 307 is not obvious in view of JP 71673 and should be in a condition for allowance. Claims 308 and 309, which depend either directly or indirectly on claims 307, are not obvious in view of JP 71673 thereof for at least the same reasons and should be allowable.

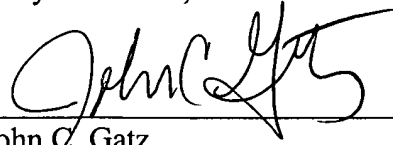
Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. It is believed that no fee is presently due; however, should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Jenkins & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47171-00267USC1.

Date: April 5, 2004

Respectfully submitted,

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AFB Currency Recognition System (date: 1982)

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A currency recognition system was developed and sold by The American Foundation for the Blind ("AFB"), New York, NY, and manufactured by Ardak Inc. in about 1982. The AFB system was a slow speed note scanner consisting of a constant speed paper path note acceptor (similar to a dollar bill changer) that moved a note in the direction of its long axis across its carriage and returned it back out. In passing the note through there was a red LED and photodiode assembly both on the bottom surface of the note as well as the top surface. In addition there was a red/green LED and photodiode assembly where the note entered the acceptor which was used to look at the ratio of reflectance of the color of the ink to determine which side of the note was the green (back) side of the note. The side of the note of interest was determined first, after which the LED/detector pair corresponding to the green side was activated and a number of digitized analog reflectance samples were taken and stored. A shaft encoder was used for synchronization. The light source was the simple spot projected by the LED with no filtering. This projected a spot roughly 1/4" to 3/8" in diameter whose reflected light was integrated and received by the photodiode detector. The output of the photodetector was amplified and fed to an analog to digital converter which was controlled by and fed data to a digital microcontroller (an Intel 8048). The microcontroller, after collecting the set number of samples synchronized to the constant speed drive, normalized the samples and correlated them against reference patterns of all denominations of U.S. currency from \$1 to \$100. The highest correlation was compared to a minimum threshold for that denomination for acceptance and, if sufficient, passed the correct value on to the next stage. The next stage then annunciated the denomination number using speech synthesis to the operator.

Tokyo Branch

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- Annual Review of Noteworthy Equipment -

(1989 Preview Edition)

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BILLCON
MIXED CURRENCY COUNTER D-202 • 204

■ **Special Features**

- The mixed currency is counted and the total amount is displayed.
- The denominations are specified, the currency is counted, and the amount and number of notes is displayed.
- When a note with a denomination other than the specified denomination is mixed in with the notes, the rollers are stopped and an alarm can be sounded.
- When mixed notes of various denominations are counted and a rejected note appears, the rollers are stopped and an alarm can be sounded.
- Specific denomination counts can be preset.
- Documents other than currency can also be counted.
- The unit can be connected to a printer or automatic teller machine. The device can also be taken online.
- The D-202 comes with an RS-232C interface, and the D-204 comes with an RS-422 interface.

■ **Performance**

Items Counted:	Three Denominations of National Currency
Counting Speed:	600 Notes Per Minute
Preset:	10, 100 Notes
Count Display:	Amount 8 Digits, Number of Notes 4 Digits
Hopper Capacity:	350 Notes
Stacker Capacity:	300 Notes
Dimensions:	Width 340 mm x Depth 335 mm x Height 250 mm
Net Weight:	Approx. 12 kg
Power Consumption:	Approx. 65 W

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ORIGINAL

BILLCON

D-202, D-204

MIXED CURRENCY COUNTER

Operation Manual

Billcon Co., Ltd.

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BILLCON MIXED CURRENCY COUNTER D-202 • D-204 OPERATION MANUAL

Summary

With Mixed Currency Counters D-202 and D-204, mixed batches of paper currency containing all three denominations are counted with the total amount of money and total number of notes simultaneously displayed. If the specific denomination mode is selected, only those notes of paper currency with the selected denomination are counted. If notes of paper currency with other denominations are mixed in with the selected denomination, these notes are sorted. The mixed currency counters have a variety of functions, including general counts and preset counts.

1. Specifications

Item	Specifications
Items Counted	Three Denominations of National Currency (¥ 10,000, ¥ 5,000, ¥ 1000), Other Notes
Counting Speed	600 Notes Per Minute (Standard Circulation Notes)
Counting Modes	1. Mixed Denomination Count 2. Selected Denomination Count 3. Other Count (Foreign Currency, etc.)
Preset Modes	Continuous, 10-Note Batch Count, 100-Note Batch Count, Add Display (There is no preset mode for mixed denomination counts.)
Count Display	1. Total Number of Notes (Four Columns) 2. Total Amount of Money (Five Columns: ¥ 1000 Units)
Add Display	Can Be Activated
Error Detection / Display	Doubles, Chained Skew, Half Notes (Horizontal or Vertical), Partial Notes, Jamming, Miscounts in Selected Denomination Counts, Unidentified Notes
External Interface	D-202: RS232C and Centronix (For Printer) D-204: RS422 and Centronix (For Printer)
Hopper Capacity	Approx. 350 Notes
Stacker Capacity	Approx. 350 Notes
External Dimensions	Width 340 mm x Depth 335 mm x Height 250 mm
Net Weight	Approx. 12 kg
Power Consumption	AC 100 V \pm 10%, 50 or 60 Hz Approx. 65 W

2. Component Names and Functions

FIG-1

[clockwise from top]

Hopper
Hopper Guide
Right Control Panel
Left Control Panel
Stacker
Power Switch
Gap-Adjusting Dial

FIG-2

Back Panel

FIG-3

Middle Control Panel

Total Amount of Money Display

1,000,000	100,000	10,000	1,000
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Count Mode

▲ Mixed	▲ 10,000	▲ 5,000	▲ 1,000
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Display Content

▼ Total	▼ 10,000	▼ 5,000	▼ 1,000
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Total Number of Notes Display

Number of Notes

Left Control Panel

Preset Display Lights

Continuous	100	10
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Preset

Add

Clear Preset

Continue

Right Control Panel

Count Mode

Items Displayed

Start	Stop
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Item	Specifications
Power Switch	When the switch is pressed, the power is turned ON. When the switch is pressed once again, the power is turned OFF. When the power is ON, the switch is lit up.
Total Amount Display	The total amount of money is displayed on a five column LED (¥1,000 units).
Total Notes Display	The total number of notes is displayed on a four column LED.
Add Switch	When an integrated display of the total amount of money and the total number of notes is required, the switch is pressed ON. When the switch is ON, the switch is lit up.
Preset Clear Switch	When the switch is pressed, the total amount display and total notes display both read zero. The displays cannot be cleared if notes of paper currency are left in the stacker. This is the printer start switch when a printer is connected to the device.
Preset Switch	When a batch count is required, this switch is pressed and the preset number is selected. (A preset count cannot be selected for "continuous" when the device is in mixed currency mode.)
Preset Display	The preset number lights up when the preset switch is pressed. The display flashes "continuous", "100", and "10" in sequential order each time the switch is pressed.
Continuous Switch and Display	When a count is suspended because of an alarm, the display indicates the type of alarm. Pressing the switch after the cause of the alarm has been addressed continues the count. (See Page 8, Section 5.)
Count Mode Switch and Display	<p>The display flashes "mixed", "¥ 10000", "¥ 5000", "¥ 1000" and "blank" in sequential order each time the switch is pressed.</p> <p>These displays mean the following.</p> <p><u>Mixed Count</u>: The count mode display reads "mixed." A mixed batch of paper currency containing the three denominations is counted.</p> <p><u>Selected Count</u>: The count mode display reads "¥ 10000", "¥ 5000", or "¥ 1000." A single denomination is selected. The notes of paper currency with the selected denomination are counted and the notes of paper currency with the other denominations are detected.</p> <p><u>Other Count</u>: Notes of paper currency other than the three denominations of national currency are counted (e.g. foreign currency). The total number of notes display is used. The total amount of money display is not used.</p>

Item	Specifications
Display Content Switch and Display Light	This is used in count mode "mixed" and, after the count, to display the total amount of money and the total number of notes for the various denominations. Moves in sequential order through "total", "¥ 10000", "¥ 5000", and "¥ 1000". The display lamps are lit up in the corresponding positions. When the display is left in a certain position for an extended period of time, the display content switch automatically reverts to "total."
Stop Switch	This switch is used to stop a count in process. When this switch is ON, the stop switch light to the left of the start switch is lit up.
Start Switch and Display Light	When a count is suspended because of an alarm, the display indicates the type of alarm. Pressing the switch after the cause of the alarm has been addressed continues the count. (See Page 8, Section 5.)
Hopper	The notes of paper currency to be counted are placed in the hopper and guides to the left and right of the notes of paper currency are set to the width of the notes. A detector determines whether any notes of paper currency remain in this component.
Hopper Guides	The guides are set to the width of the notes of paper currency.
Gap Adjusting Dial	The thickness of the notes of paper currency to be counted is set based on the quality of the paper. The dial adjusts the space between drums. Arrows indicate the dial setting for ordinary notes of paper currency. When notes thicker than ordinary notes of paper currency are to be counted the dial is moved to a thicker setting.
Back Panel	The back panel is opened when notes of paper currency become jammed inside the device or when the device is to be cleaned or checked.
Middle Panel	This panel is equipped with display lights used to display totals, count modes, and denominations.
Stacker	Notes of paper currency that have been counted and sorted are placed here. Blades and a receiving plate are used to collect the notes of paper currency.
Left Control Panel	This panel contains the add switch and display light, the preset clear switch and display light, and the preset switch and display light.
Right Control Panel	This panel contains the count mode switch, the display contents switch, the stop switch, the start switch, and display lights.

3. How to Use the Machine

Notes of paper currency are counted using the following procedure.

Step	Details
(1) Power Connection	The power cord is plugged into an outlet behind the machine. When the machine is being used for the first time, make sure the guides protecting the rubber roller are free. Consult the attached instructions when setting the guides.
(2) Adjust the Gap	Set the red mark on the gap-adjusting dial to the position corresponding to the appropriate arrow.
(3) Power Switch ON	An "8" appears in all of the columns in the total amount display and total number of notes display. After a few seconds, zeroes appear in these columns. At this point, the motor runs for a moment. If any notes of paper currency remain in the machine, these will be discharged. After the power has been switched ON, the mode is set using the appropriate switches. The count mode selected is "mixed", the display content is "total", and the preset is "continuous."
(4) Count Mode Selected	The count mode switch is used to select the desired count mode: "mixed denomination," "specific denomination", or "note count". (Immediately after the power is turned ON, the device is in "mixed denomination" mode.) When the mode is switched after a count, the count details are cleared. The device will not operate after the mode is switched if notes of paper currency from a previous count remain in the stacker.
(5) Preset Selected	"Continuous," "100" or "10" is selected using the preset switch.
(6) "Add" Selected	The add switch is turned ON when the values for the number of notes and the amount of money are to be integrated. When the add switch is turned ON, the count displays are added together without being cleared, even when counted notes of paper currency have been removed from the stacker. When the preset clear switch is pressed, the count values are cleared. The count values cannot be cleared if any of the counted notes of paper currency remain in the stacker.
(7) Count	The notes of paper currency are placed in the hopper. The count begins automatically. When the count is to be started using the start switch after the notes of paper currency have been placed in the hopper, the stop is pressed first. The start switch is then pressed afterwards.

4. Counts Using the Various Count Modes

The count mode is selected based on the following specifications.

	Mixed Denomination	Specific Denomination	Note Count
Counted Items	Batches of mixed denomination national currency (¥ 10,000, ¥ 5,000, ¥ 1,000)	One denomination of national currency (¥ 10,000, ¥ 5,000 or ¥ 1,000)	Notes other than the denominations of national currency (e.g. notes of foreign currency)
Count Mode Selection	Mixed	¥ 10,000, ¥ 5,000 or ¥ 1,000	All of the count mode display lights are OFF.
Total Amount Display	Total amount from the batch of mixed denomination currency	Total amount from the selected denomination of currency	Not displayed
Total Notes Display	Total number of notes from the batch of mixed denomination currency	Total number of notes from the selected denomination of currency	Total number of notes
Total Amount and Total Notes Display Using Display Content Switch	The total amount of money and the number of notes for the various denominations of currency are displayed. The total amount of money and the number of notes for various denominations can be selected and displayed using the switches.	NA	NA
Preset Number Selection	The "continuous" total cannot be preset.	Select "continuous," "100" or "10"	Select "continuous," "100" or "10"
Count Operation and Total When Preset	Counts all of the notes of paper currency in the hopper. When the notes of paper currency are removed from the stacker, the numbers in the display revert to zero to start the next count. However, when the add switch is ON, the totals are added without the displays reverting to zero.	When the preset number is achieved, a buzzer sounds and the count is automatically suspended. When the notes of paper currency are removed from the stacker, the numbers in the display revert to zero to start the next count. However, when the add switch is ON, the totals are added without the displays reverting to zero.	Same as left

5. Alarm Causes and Procedures

When an alarm goes off during a count, the count is automatically suspended.

When the alarm is an "A Alarm", the count is suspended and the displays flash. When the alarm is a "B Alarm", a buzzer sounds and the displays flash. The following procedures are performed when one of these two types of alarm goes off.

5-1 A Alarm

When an "A Alarm" goes off, the "start" light flashes and a recount is performed.

Cause	State	Alarm Display	Procedure
Jam	Notes of paper currency are lodged in the machine.	Flashing Displays *	<ul style="list-style-type: none">• The back panel is removed and the apron is lowered (FIG-2). The notes of paper currency in the machine are removed and placed in the hopper. (Only when jammed)• The counted notes of paper currency in the stacker are placed in the hopper.• When the start switch is pressed, the displays return to zero and a recount is performed. (When the add switch is ON in the batch count mode, the displays return to the previous numbers and the add function is performed.)
Chained Skew	There is no spacing between multiple notes of paper currency.	Flashing Displays *	Same as above.
Doubles	There is overlapping between multiple notes of paper currency.	Flashing Displays *	Same as above.

5-2 B Alarm

When an "B Alarm" goes off, the "continue" light flashes, a buzzer sounds, and the count can be continued.

Cause	State	Alarm Display	Procedure
Half Notes	Notes of paper currency severed horizontally or laterally are detected.	Flashing Displays and Buzzer *	The notes of paper currency causing the problem are removed from the stacker (to be processed at the end of the process). When the "continue" button is pressed, the count is continued. The count resumes from the totals on the display before the interruption.
Unidentified	Notes of paper currency cannot be identified.	Flashing Displays and Buzzer *	Same as above.
Specific Denomination	A note of paper currency from an unspecified denomination is detected.	Flashing Displays and Buzzer *	Same as above.

* The flashing displays are the total amount display and the total number of notes display.

6. Warnings

6-1 Damaged Notes of Paper Currency

The following notes of paper currency will cause an alarm to go off and may cause a count to stall: excessively wrinkled notes, notes with bent corners, notes with cut corners, notes with holes, notes with tape attached, and excessively dirty or stained notes.

6-2 Frequent Chained Skew Errors

If the gap-adjusting dial is not set correctly, the device will not operate properly.

If the dial is set to the first or second "thin" settings, the machine will operate properly.

6-3 Frequent Double Errors

If the gap-adjusting dial is not set correctly, the device will not operate properly and multiple notes of paper currency will be processed simultaneously. If the dial is set to a "thinner" setting, the machine will operate properly. Also, excessively dirty notes of paper currency will be detected as a "double." These notes should be removed.

6-4 Machine Placement

Placement of the machine in an excessively bright location (e.g. in direct sunlight) should be avoided.

6-5 Cleaning the Lights and Sensors

An alarm will go off if the sensors become dusty. Clean the sensors once a day. Gently clean the lights and sensors with a soft brush or dry cloth.

The lights and sensors should be cleaned in the following locations. Open the back panel and lower the guide plate. The lights are located on this guide plate. (See FIG-2.) The sensors are located above the guide plate opposite the lights.

6-6 Cleaning the Rollers

The surfaces of the rollers become covered with oil and printing ink when used over an extended period of time. Because this contamination can lead to the miscount or misidentification of notes of paper currency, the surfaces of the rollers should be cleaned once every two months using a cloth containing a small amount of alcohol. (Paint thinner and benzene should not be used to clean the rollers.)

ORIGINAL

#1 Translation

611215

-BILLCOM

D-202, D-204

MIXED CURRENCY COUNTER

HANDLING MANUAL

BILLCOM CO., LTD. . .

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MANUAL OF MIXED CURRENCY COUNTER D-202/204

SUMMARY:

MIXED CURRENCY COUNTER D-202/204 counts three denominations of paper currency being mixed, and indicates the total yen value and number of notes processed as well. In the mode of "designated dominations", COUNTER counts only the notes of the designated designation and selects out the notes of other denominations, if any. COUNTER is multifunctional not only to count ordinary notes but also to perform Preset Counting.

1. SPECIFICATIONS

ITEMS	SPECIFICATIONS
Counting Objects	Three Denominations of Domestic Paper Currency (¥10,000, ¥5,000 and ¥1,000), and their Equivalents
Counting Speed	600 Notes per Minute (for Ordinary Paper Currency)
Counting Modes	1. Mixed Denominations 2. Designated Denominations 3. (Foreign & Domestic) Paper Currency
Preset Number	Continuous, Batch Counting of 10 or 100 Notes, and ADD Indication (but cannot for the "Mixed Counting Mode")
Indication of Counts	1. No. of Notes: Four Figures 2. Yen Value: Eight Figures (at ¥1,000)
ADD Indication	Selectable
Error Detect/Indicate	Doubled, Chained, Halved (Longitudinally or Transversally), Jamming, Different Denomination in the Mode of the "Designated Denomination", or Non-Discriminative Note
External Interfaces	D-202: RS232C & Centronics (for Printers) D-204: RS422 & Centronics (for Printers)
Hopper Capacity	about 350 Notes
Stacker Capacity	about 300 Notes
External Size	340 mm Wide x 335 mm Deep x 280 mm High
Weight	about 12 Kg
Power Supply	AC 100 V \pm 10 %, 50 or 60 Hz Power: 85 W

2. 各部の名称とはなから

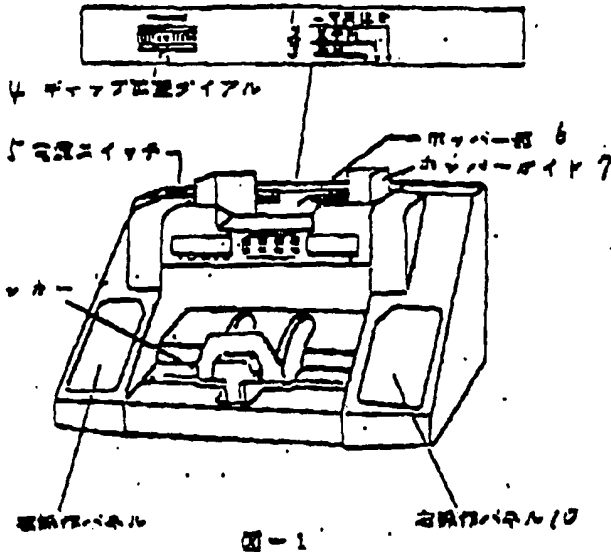


図-1

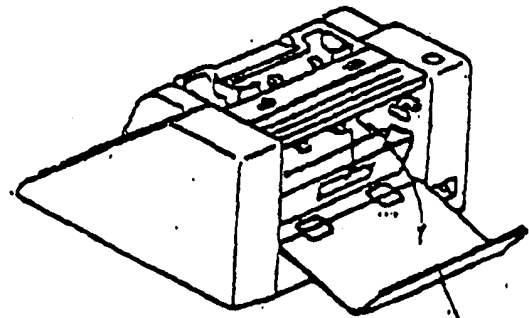
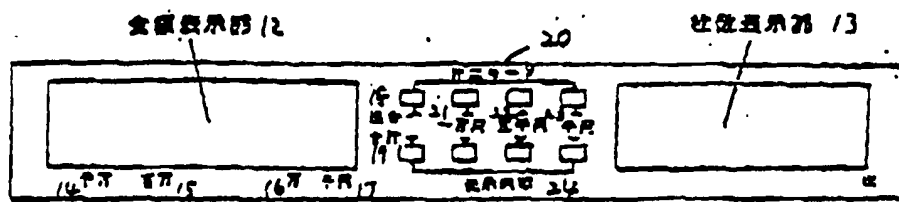
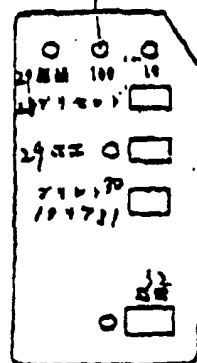


図-2

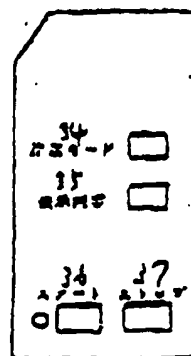


中央パネル 25

プリセット表示ランプ 26



33 制御パネル



38 制御パネル

図-3

2. NAMES AND FUNCTIONS OF PARTS

- 1 \$10,000 Mixed
- 2 \$5,000 Mixed
- 3 \$1,000 Mixed
- 4 Gap Adjusting Dial
- 5 Power Switch
- 6 Hopper
- 7 Hopper Guides
- 8 Stacker
- 9 Left Control Panel
- 10 Right Control Panel
- 11 Rear Cover
- 12 Value Indicator
- 13 Note No. Indicator
- 14 \$10,000,000
- 15 \$1,000,000
- 16 \$10,000
- 17 \$1,000
- 18 Mixed
- 19 Total
- 20 Counting Mode
- 21 \$10,000
- 22 \$5,000
- 23 \$1,000
- 24 Indications
- 25 Center Panel
- 26 Preset Indication Lamps
- 27 Continuous
- 28 Preset
- 29 Add
- 30,31 Print/Clear
- 32 Continuous
- 33 Left Control Panel
- 34 Counting Mode
- 35 Indications
- 36 Start
- 37 Stop
- 38 Right Control Panel

NAMES	FUNCTIONS
Power Switch	"ON" when pushed, and "OFF" when pushed again. Lamp in the switch is lit during "ON".
Value Indicator	Value is indicated with LED of five figures (at ¥1,000)
Note No. Indicator	Counted Note Number is indicated with LED of four figures.
"ADD" Switch	"ON" when pushed, to indicate the accumulations of the value and the note number. Lamp is lit during "ON".
Print/Clear Switch	Both the value and the note number are set, when pushed, to "0". Clearance is not made while notes or papers are left on Stacker. Acts as Start Switch for Printer when connected to it.
"Preset" Switch	Pushed to select a preset number for the batch counting. (In the "Mixed" mode, however, the preset counting is impossible but for the "Continuous" mode.)
"Preset" Indication Lamp	Lit to indicate the preset number selected by "Preset" Switch. Shifted to "Continuous", "100" and "10" in this order each time Switch is pushed.
"Continuous" Switch & Indication Lamp	Lit according to the kinds of alarms when countings are stopped with the alarms. Continues, when pushed, the stopped countings after the causes have been removed. (Item 5 of page 5)
"Counting Mode" Switch & Indication Lamp	Shifted from the "Mixed" to "¥10,000", "¥5,000", "¥1,000" and "No Light" in this order each time Switch is pushed. "No Light" implies the state of the (following) note number.

	<p>Mixed Denominations:</p> <p>Counting Mode Indication Lamp indicates "Mixed".</p> <p>Three denominations of paper currency can be counted while being mixed.</p> <p>Designated Denominations:</p> <p>Counting Mode Indication Lamp selects one denomination of "¥10,000", "¥5,000" and "¥1,000". Counts the designated denomination and discriminates the notes of different denominations.</p> <p>Paper Currency:</p> <p>Counts foreign notes and coupons other than the domestic notes (of the three denominations).</p>
"Indication Content" Switch & Indication Lamp	<p>Used in the "Mixed" counting mode for accumulating the values and numbers of notes of individual denominations counted.</p> <p>Shifted to "Total", "¥10,000", "¥5,000" and "¥1,000" in this order.</p> <p>Indication Lamp at the position of indication is lit.</p> <p>This indication is automatically returned to the "Total" indication after lapse of a predetermined time after Switch was operated.</p>
"Stop" Switch	<p>Used for stopping the counting midway.</p> <p>"Start Switch Lamp" at the left of "Start Switch" is lit when Switch is turned "ON".</p>

'Start' Switch & Indication Lamp	<p>LR according to the kinds of alarms when countings are stopped with the alarms.</p> <p>Restart, when pushed, the stopped countings after the causes have been removed. (Item 8 of page 8)</p>
Hopper	<p>Used to place the notes to be counted thereon, and equipped at its right and left with guides for determining the note width.</p> <p>Further equipped at the note placing portion with a detector for checking the existence of notes.</p>
Hopper Guides	Determines note width.
Gap Adjusting Dial	<p>Let off according to the thickness or quality of the notes or coupons to be counted, to adjust the gap between drums.</p> <p>Used for the ordinary notes with its Red Mark being aligned with Arrow Mark.</p> <p>Turned to "THICK" for counting thicker notes.</p>
Rear Cover	Opened when notes are left inside of COUNTER or when the inside is to be cleaned or inspected.
Counter Panel	Equipped with Indication Lamps for indicating the value and number of notes and the counting mode, and Indication Lamps for indicating the indication contents of individual denominations.
Stacker	<p>Here are arranged the notes counted and let off.</p> <p>Equipped with a runner and a support plate for arranging the notes.</p>
Left Control Panel	Equipped with "ADD" Switch and its Indication Lamp, "Print/Clear Switch" and its Indication Lamp, "Continuous" Switch and its Indication Lamp, and "Preset Switch" and its Indication Lamp.
Right Control Panel	Equipped with "Counting Mode" Switch, "Indication Content" Switch, "Stop" Switch and "Start" Switch, and their Indication Lamps.

3. HOW TO USE

Countings should follow the following PROCEDURE.

PROCEDURE	CONTENTS
(1) Connect Power	Power Cord is fully inserted into Power Receptacle on the rear of COUNTER. (Note) At a first use after unpackaging, guide portions are free for protecting rubber rollers and are set according to the description attached hereto.
(2) Adjust Gap	Red Mark of Gap Adjusting Dial is aligned with Arrow Position.
(3) Turn "ON" Power Switch	Numerical Character "8" is indicated in all the figures of Number Indicator and Value Indicator and turned to "0" after several seconds. Then, Motor rotates for a short time to remove the notes or the like, if left inside of COUNTER, until it stops. After "ON", the Switches take the following modes. The counting mode is "Mixed"; the indication content is "Total"; the preset is "Continuous".
(4) Set Counting Mode	Any of "Mixed", "Designated Denomination" and "Paper Currency" is selected with "Counting Mode" Switch (although "Mixed" mode prevails just after Power Switch was "ON"). When the mode is switched after the counting, the previous counted content is cleared. COUNTER will not work if any previous counted note is left on Stacker after switched.
(5) Select Preset No.	"Continuous", "100" or "10" is selected with Preset Switch.
(6) Select ADD	ADD Switch is turned "ON" when the counted numbers and values are to be accumulated. With ADD Switch "ON", the indications of counts are not cleared but added even if the counted notes are removed from Stacker.
(7) Count	Notes are neatly arranged and placed on Hopper. The counting starts automatically. In the case of start with Switch after notes were placed on Hopper, Stop Switch is pushed beforehand, and Start Switch is then pushed.

4. COUNTINGS IN OPERATION MODES

Please select a counting mode matching the following specifications at the time of selecting each counting mode.

	MIXED	DESIGNATED DENOMINATIONS	PAPER CURRENCY
Notes and Coupons to Be Counted	Mixed Counting of Domestic Notes (\$10,000, \$5,000 and \$1,000)	Counting of One Denomination of the Domestic Notes	Countings of Foreign Notes and Coupons Other Than the Domestic Notes
Selection of 'Counting Mode'	Mixed	Select "\$10,000", "\$5,000" and "\$1,000"	Indication Lamps of all 'Counting Modes' are not lit.
Indications of Values	Total Value of Mixed Denominations	Total Value of Designated Denomination	No Indication
Indications of Note Numbers	Total Number of Mixed Denominations	Total Number of Designated Denomination	Total Number of Coupons
Indications of Value and Number with 'Indication Content' Switch	The total value and number of denominations are indicated. The value and number of a designated denomination can be selectively indicated with Switch.		
Selection of 'Preset Number'	Only "Continuous" counting cannot be preset.	"Continuous", "100" or "10" is selected.	
Counting Operation and Value at the Preset	All notes on Hopper are counted. When notes are removed from Stacker, all indications are returned to "0", and the subsequent counting is started. With ADD Switch 'ON', however, the indications are added with no return to "0".	When the preset number is reached, Buzzer goes, and the counting stops automatically. When the notes are removed from Stacker, the indications return to "0" to start the subsequent counting. With ADD Switch 'ON', however, the counted indications are added with no return.	

5. CAUSES FOR AND TREATMENTS OF ALARMS

The counting stops automatically when Alarms go.

The alarming state is coarsely divided into A Alarm, in which the indication flashes simultaneously with the stop, and B Alarm, in which the buzzer goes simultaneously with the flashing. These two kinds of alarms are differently processed as follows.

5-1 A Alarm

At the time of this Alarm, "Start Lamp" is lit to reopen the counting.

KINDS OF CAUSES	STATES	ALARM INDICATIONS	TREATMENTS
Jamming	Notes are left inside of COUNTER	Flashing Indications	<ul style="list-style-type: none"> ● Rear Cover is opened to move Apron downward, and notes left inside (as shown in Fig. 2) are removed and returned to Hopper (only in the jamming case). ● Counted notes in Stacker are also returned to Hopper. ● When "Start" Switch is pushed, the indication returns to "0" to reopen the counting. (With ADD Switch ON in the batch counting mode, however, the indication returns to the previous accumulated numerical value with no addition.)
Chained	Notes are let off with no interval.		
Doubled	Notes are let off while being doubled.		

5-2 B Alarm

At the time of this Alarm, Buzzer goes simultaneously as "Continuous Lamp" is lit, and the Continuous counting is possible.

KINDS OF CAUSES	STATES	ALARM INDICATIONS	TREATMENTS
Halved	Notes, as longitudinally or transversely divided, are detected.	*Flashing indications and Buzzing	● Only causing notes (or notes finally let off) are removed from Stacker.
Non-Discriminative	Discriminations of notes are impossible.		● Counting is continued if "Continuous" Switch is pushed.
Designated Denomination	Different denominations are discriminated at the "Designated Denomination" time.		● The indications of counts are added to the indicated value before the stop.

*Flashing indications: Indications of Value and Number Flash.

6. CAUTIONS ON HANDLING

6-1 Removal of Notes Improper for Countings

The following notes may cause the alarms or may trouble the countings and should be removed beforehand, if possible: notes having extremely many wrinkles; notes having folded or cut corners; holed or broken notes; notes having adhesive tapes thereon; and extremely soiled notes.

6-2 Frequent Errors of Chained Notes

These errors are caused because Gap Adjusting Dial has failed to be set at the proper position so that the let-off is not correct.

The Dial is turned to the "THIN" side by one or two scales to make an adjustment for the correct let-off (although the turned position may overrun the ordinary red mark).

6-3 Easy Errors of Doubled Notes

These errors are caused because the set position of Gap Adjusting Dial is improper so that notes are simultaneously let off. Dial is turned to "THIN" for the adjustment. As a matter of fact, seriously soiled notes may be discriminated as the doubled ones and are then removed.

6-4 Places for Use

It is advisable to avoid the use at an extremely bright place (as may be exposed to a direct solar ray).

6-5 Cleaning of Lamps/Sensors

An alarm may arise when sensors catch paper or dust.

Sensors should be cleaned once a day.

Sensors and Lamps should be wiped on their surfaces with soft brush or dry cloth. Lamps can be accessed to by opening Rear Cover and by moving down lower Guide Plate (as shown in Fig. 2). Sensors can be located at upper positions facing those Lamps.

6-6 Cleaning of Rollers

Rollers are soiled on their surfaces with printing ink or fats and oils after a long use. These soils may affect the let-off of notes adversely, and the roller surfaces should be wiped with clean cloth wetted with a small quantity of alcohol, once at two months (while avoiding thinners or benzenes).

ORIGINAL

BILLCON

611215

D-202, D-204

混合紙幣計数機

取扱説明書

ビルコン株式会社

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2. 各部の名称とはたらき	-----3
3. 使用方法	-----6
4. 各計数モードによる計数	-----7
5. アラームの原因と処理	-----8
6. 取扱い上の注意	-----9

D-202、D-204 混合紙幣計数機 取扱説明書

概要 D-202及びD-204 混合紙幣計数機は3金種の紙幣を混合したまま計数してその合計金額と枚数を同時に表示します。‘金種指定’のモードにすると、指定した金種のみ計数してその中に指定金種以外の金種紙幣が混入している時、これを選別します。一枚の紙葉の計数、プリセット計数も出来る多機能な紙幣計数機です。

1. 仕様

項 目	仕 様
計 数 対 象	国内紙幣 3金種(10,000円、5,000円、1,000円)及びこれに準ずる紙葉
計 数 速 度	600枚/分(通常流通紙幣)
計 数 モ ー ド	1. 金種混合計数 2. 金種指定計数 3. 紙葉(外国紙幣と紙葉)計数
プリセット計数	連続、10、100枚のバッチ計数及び加算表示 (但‘混合モード’ではプリセットはできません。)
計 数 表 示	1. 枚数表示 4桁 2. 金種表示 5桁 (1000円単位表示)
加 算 表 示	選択可能
エラー検知・表示	2重、連鎖、半券(縦又は横)、ジャム、‘金種指定’モード時の異金種、判定不能紙幣
外部インターフェース	D-202: RS232C及びセントロニクス(プリンター用) D-204: RS422及びセントロニクス(プリンター用)
ホ ッ パ 容 量	約350枚
ス タ ッ カ 容 量	約300枚
外 形 寸 法	幅 340mm × 奥行 335mm × 高さ 250mm
重 量	約12Kg
電 源	AC 100V±10% 50又は60Hz 電力 65W

2. 各部の名称とたたき

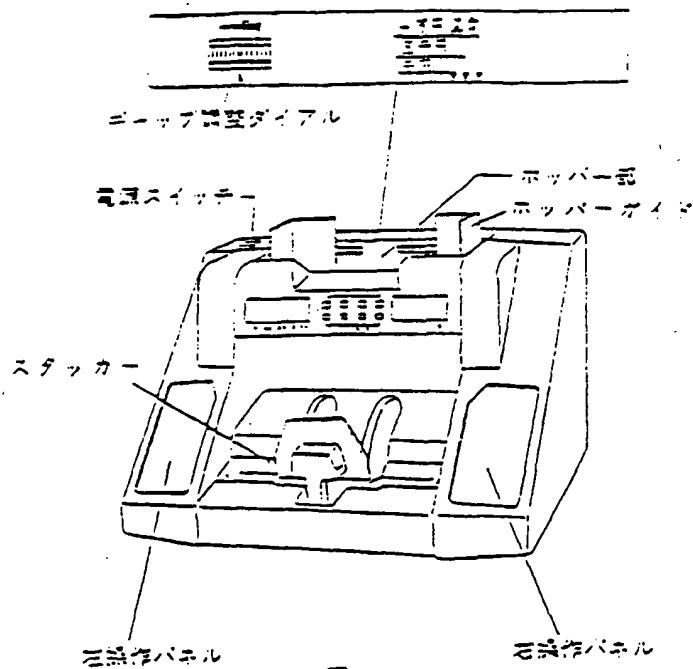


図-1

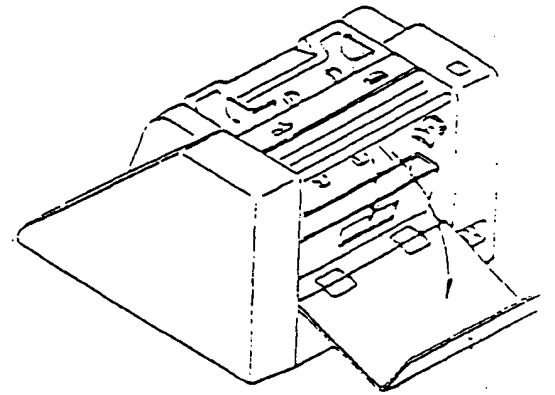
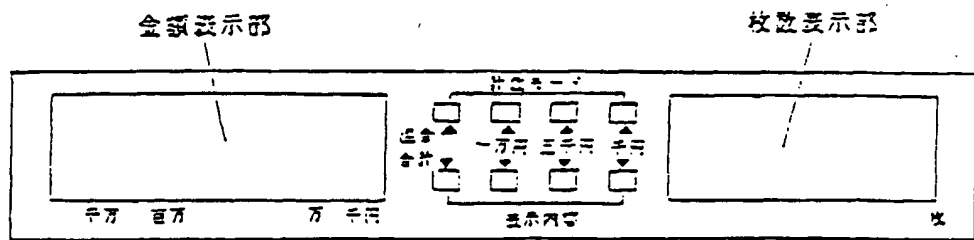
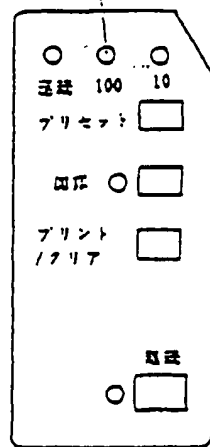


図-2

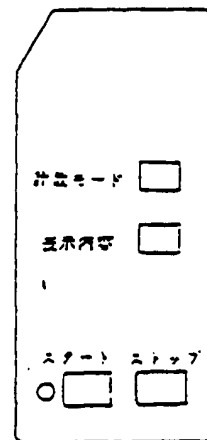


中央パネル

プリセット表示ランプ



左操作パネル



右操作パネル

図-3

名 称	は た ら き
電源スイッチ	押すと“ON”になり、もう一度押すと“OFF”となります。 電源が“ON”の時スイッチの中のランプが点きます。
金額表示部	金額を5桁(1000円単位)のLEDで表示します。
枚数表示部	計数枚数を4桁のLEDで表示します。
“加算”スイッチ	金額と枚数の積算表示を必要とする時、このスイッチを押して“ON”にします。“ON”の時ランプが点きます。
プリント/クリアスイッチ	このスイッチを押すと、金額表示、枚数表示共“0”になります。 但スタッカーに紙幣、紙葉が残っている時はクリアされません。 プリンター接続時にはプリンターのスタートスイッチとなります。
“プリセット”スイッチ	バッチ計数を必要とする時、このスイッチを押してプリセット数を選択します。(但し“混合”モード時は“連続”のみでプリセット計数はできません。)
“プリセット”表示ランプ	“プリセット”スイッチで選択されたプリセット数が点灯表示します。 表示ランプはスイッチを押すとその度に“連続”、“100”、“10”の順に移行します。
“継続”スイッチ と 表示ランプ	アラームで計数停止した時、アラームの種類に応じてこのランプが点灯します。原因を処理した後、このスイッチを押すと計数が継続されます。(8頁第5項)
“計数モード”スイッチ と表示ランプ	このスイッチを押すと、その度に計数のモード表示ランプが“混合”から“1万円”、“5千円”、“千円”、“全て点灯しない”の順に移行します。 上記“全て点灯しない”の状態は紙葉計数(下記)を意味します。 金種混合: 計数モード表示ランプ“混合”を表示。 3金種の紙幣が混ざったまま計数できます。 金種指定: 計数モード表示ランプは“1万円”、“5千円”、“千円”の内 1金種選択。 指定した金種を計数し異った金種の紙幣を検知します。 紙葉計数: 国内紙幣(上記3金種)以外の外国紙幣や紙葉の計数を行います。枚数表示だけで金額は表示しません。

<p>‘表示内容’スイッチと 表示ランプ</p>	<p>計数モード‘混合’の時計数後各金種の金額合計と枚数合計を知りたい時使用します。</p>
	<p>‘合計’‘1万円’‘5千円’‘千円’の順に移行します。</p> <p>その表示を示す位置の表示ランプが点灯します。</p> <p>この表示は この‘表示内容’スイッチ操作後一定時間経過すると自動的に‘合計’表示に戻ります。</p>
<p>‘ストップ’スイッチ</p>	<p>計数途中に計数を止める時、使用するスイッチです。</p> <p>このスイッチを‘ON’にすると‘スタートスイッチ’左の‘スタートスイッチランプ’が点灯します。</p>
<p>‘スタート’スイッチと 表示ランプ</p>	<p>アラームで計数停止した時、アラームの種類に応じてこのランプが点灯します。原因を処理した後、このスイッチを押して、再計数をします。(8頁 第5項参照)</p>
<p>ホッパー部</p>	<p>計数する紙幣をのせるところで、左右に紙幅を決めるガイドが設けられています。又、紙幣を載せる部分に紙幣の有無をチェックする検出器がついています。</p>
<p>ホッパーガイド ギャップ調整ダイヤル</p>	<p>紙幅を決めるガイドです。</p>
	<p>計数する紙幣や紙葉の厚さ、紙質に応じて検出しドラムのスキ間を調整するダイヤルです。通常の紙幣の場合、矢印マークにダイヤルの赤マークを合わせた位置で使します。</p> <p>より厚い紙幣等を計数する場合にはダイヤルを‘THICH’ (厚い)の方へ回します。</p>
<p>後面カバー</p>	<p>紙幣が機械の内部に残ってしまったり、内部の清掃や点検をする時、このカバーを開けます。</p>
<p>中央パネル</p>	<p>金額と計数の表示、計数モードの表示ランプ及び各金種の表示内容を示す表示ランプがついています。</p>
<p>スタッカー</p>	<p>計数されて検出された紙幣がここで揃えられます。</p>
<p>左操作パネル</p>	<p>紙幣を揃えるための羽根車と紙葉受板からなっています。</p> <p>‘加算’スイッチとその表示ランプ、‘プリセット/クリアスイッチ’‘継続’スイッチとその表示ランプ 及び‘プリセット’スイッチとその表示ランプがついています。</p>
<p>右操作パネル</p>	<p>‘計数モード’スイッチ、‘表示内容’スイッチ、‘ストップ’スイッチ 及び ‘スタート’スイッチとその表示ランプがついています。</p>

3. 使用方法

次の手順に従って計数を行います。

手 順	内 容
(1)電源接続	電源コードを機械の後面にある電源レセプタクルに確実に差し込みます。(注)梱包をあげて始めて使用される場合、ゴムローラー類の保護のためガイド部がフリーとなっています。添付説明に従って セットします。
(2)ギャップ調整	ギャップ調整ダイヤルの赤いマークを矢印の位置に合わせます。
(3)電源スイッチ“ON”	枚数表示部、金額表示部のすべての桁に“8”を表示し、数秒後に“9”になります。この時、モータも短時間回転して、若し機械内部に紙幣等が残っていれば、それを排除して停止します。 電源を“ON”にしたあと各スイッチのモードは次のようになります。 計数モードは“混合”、表示内容“合計”、プリセットは“連続”となります。
(4)計数モード設定	“計数モード”スイッチで“混合”、“金種指定”又は“紙幣計数”のいずれかを選択します。(但電源スイッチ“ON”直後は“混合”モードになっています。)計数後にモードを切換えると 前回迄の計数内容はクリアされます。又、切換えた後スタッカに前回計数した紙幣が残っている時は計数機は動作しません。
(5)プリセット数の選定	プリセットスイッチで“連続”“100”“10”を選びます。
(6)加算の選択	計数した枚数と金額の値を積算したい場合には、加算スイッチを“ON”にします。加算スイッチ“ON”の場合、計数された紙幣をスタッカから取り除いても、計数表示はクリアされずに加算されていきます。 プリント/クリアスイッチを押すとこの計数値はクリアされますが、スタッカに紙幣が残っている時には、クリアが出来ません。
(7)計数	紙幣を良く揃えてホッパーに載せます。自動的に計数を始めます。 紙幣をホッパーに載せてからスイッチにてスタートさせる場合は、あらかじめストップスイッチを押しておき、その後スタートスイッチを押します。

4. 各計数モードによる計数

各計数モードの選択時、次の仕様に適した計数モードを選択して下さい。

	混 合	金 種 指 定	紙 葉 計 数
計数対象の紙幣 と紙葉	国内紙幣(1万円、5千円 千円)の混合計数。	国内紙幣(左記)の内 1金種に限った計数。	国内紙幣(左記)以外 の 外国紙幣や紙葉の計数。
“計数モード” の選択	混 合	“1万円” “5千円” 及び “千円” を選択。	全ての“計数モード” の 表示ランプは点灯しま せん。
金額表示	混合金種の合計金額	指定金種の合計金額	表示しません。
枚数表示	混合金種の合計枚数	指定金種の合計枚数	紙葉の合計枚数
“表示内容” スイ ッチによる金額 及び枚数表示	各金種の合計金額を枚数 合計を表示しますが スイッチによって指定金 種の金額と枚数を選択表 示できます。	_____	_____
“プリセット数” の選択	“連続” 計数のみプリセッ トはできません。	“連続” “100” 又は“10” を選択	
プリセット時の 計数動作と金額	ホッパー上の 全紙幣を 計数。スタッカーより紙 幣を取り除くと各表示共 “0” に復帰して、次の計 数を開始。但し、加算スイ ッチ “ON” 時は各表示共 0に復帰せず加算します。	プリセット数に達した時、ブザーが鳴り、計数は 自動的に停止します。スタッカーから紙幣を取り 除くと各表示共“0” に復帰して次の計数を開始。 但し、加算スイッチ“ON” の時の 計数表示は復帰 せず加算されていきます。	

5. アラームの原因と処理

計数中にアラームが発生すると、計数は自動的に停止します。

アラームの状態を大別すると、停止と同時に表示が点滅するだけのAアラームと、表示点滅と同時にブザーが鳴るBアラームの2種類があり、それぞれ処理の方法が次に示すように違います。

5-1 Aアラーム

このアラームの時は、「スタートランプ」が点灯しますので再計数をします。

原因の種類	状 態	アラーム表示	処 置
ジャム	機械の中に紙幣が残ってしまった場合。	* 表示点滅	<ul style="list-style-type: none"> ・後面カバーを開けて エプロン部を下に下げ、(図-2 参照)内部に残っている紙幣を取り除き ホッパーに戻します。 (ジャムの場合のみ) ・スタッカー部の計数済紙幣もホッパーに戻します。 ・「スタート」スイッチを押すと、表示は「0」に復帰して計数が再開されます。 (但し、バッチ計数モードで加算スイッチONの場合は、表示は前回迄の累積数に戻り、加算されます。)
連鎖	複数の紙幣が間隔をあけずに繰出された場合。		
二重	複数の紙幣が重なって繰出された場合。		

5-2 Bアラーム

このアラームの時は「継続ランプ」が点灯すると同時にブザーが鳴り、継続計数を行うことができます。

原因の種類	状 態	アラーム表示	処 置
半 券	上下方向 又は 左右方向に分割された紙幣が検知された時。	* 表示点滅と ブザー音	<ul style="list-style-type: none"> ・原因となった紙幣(最後に繰出された紙幣)だけを スタッカー部から取り除きます。 ・「継続」スイッチを押すと計数が継続します。 ・計数の表示は、停止前の表示値に加算されていきます。
判定不能	紙幣の判別が不可能な場合。		
指定金種	「金種指定」計数時に具金種が検知された時。		

* 上記表示点滅は、金額表示 及び 枚数表示が点滅します。

6. 取扱い上の注意

6-1 計数に不適当な紙幣の除去

次のような紙幣は、アラームの原因となったり、計数上支障をおこす場合があります。出来れば事前に取り除きます。しわが極端に多いもの、隅が折れたり、切れたりしているもの、穴があいたり破れたりしているもの、粘着テープ等が貼ってあるもの、著しく汚れているもの。

6-2 連鎖エラーが頻発する場合

ギャップ調整ダイヤルが適正なセット位置になっていないため、繰り出しが正しく行なわれていないためです。

ダイヤルを1～2目盛“THIN”（薄い）の方へ回し、正しく繰出すように調整します。（通常の赤線マーク目盛からズレても差しつかえありません。）

6-3 二重エラーがおきやすい場合

この場合も、ギャップ調整ダイヤルのセット位置が不適当で、複数の紙幣が同時に繰り出されてしまうためです。ダイヤルを“THIN”の方へ回して調整します。

又、実際に汚れの大きい紙幣が二重紙幣として検出されることもあります。これは、取り除きます。

6-4 使用場所

極端に明るい場所（太陽光線が直接入る場所）での使用は避けて下さい。

6-5 ランプ・センサーの清掃

センサーの部分に、紙、ホコリ等が付くとアラームとなることがあります。

1日に1回はセンサー部分の清掃をして下さい。

柔かいブラシか乾いた布でセンサー及びランプの表面を拭いて下さい。

ランプとセンサーは、次の場所にあります。後面カバーを開けると下側ガイド板があり、このガイド板を下げると、このガイド板にランプがついています。（図-2参照）

センサーは、これらのランプに対向した上側の位置にあります。

6-6 ローラの清掃

長時間使用していると、各ローラの表面に印刷インクや油脂類の汚れが付着します。紙幣の繰り出しに影響を及ぼすこともありますので、2ヶ月に1回程度、少量のアルコールを浸したきれいな布で、その表面を拭いて下さい。

（シンナー、ベンジン類は避けて下さい。）